

### ***Remarks***

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 47-63 are pending in the application, with 47, 53, and 56 being the independent claims. Claim 47 is sought to be amended. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

### ***Telephonic Interview with Examiner***

A personal telephonic interview was held on Wednesday, May 5, 2004, between Examiner Jan M. Ludlow, and Applicants' representative Kendrick Patterson (Registration. No. 45,321). Applicants would like to thank the Examiner for her indulgence and cooperation.

During the interview, Applicants' representatives and the Examiner discussed the differences between the two Groups of claims identified in the Examiner's Restriction Requirement (see Paper No. 03202004). No agreement was reached regarding the proper interpretation of the perceived differences among the Groups. However, Applicants' representative offered to amend the claims so that both Groups may be examined together. As discussed in greater detail below, Applicants do not acquiesce in the propriety of the restriction, but are willing to amend the claims to advance prosecution.

### ***Restriction Requirement***

In the Office Action, the Examiner restricted claims 47-63 into two Groups: namely Group I representing claims 47-55; and Group II representing claims 56-63. The Examiner alleges that Group I and Group II are "related as combination and subcombination" because "(1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the

subcombination has utility by itself or in other combinations.” (See Paper No. 03202004, page 2).

Applicants hereby provisionally elect to prosecute the invention of Group I, represented by claims 47-55. This election is made with traverse, and without prejudice to or disclaimer of the other claims or inventions disclosed.

Notwithstanding the aforesaid election, Applicants believe the restriction requirement has been rendered invalid and/or moot in light of the proposed amendment. For instance, the Examiner alleges that

the combination as claimed does not require the particulars of the subcombination as claimed because the combination does not require, e.g., step-wise rotation of the carousel or that the liquid conduits are positioned along a radius with respect to the axis of rotation. The subcombination has separate utility such as a carousel for testing the purity of polymer synthesis reagents where synthesis occur elsewhere in the apparatus. (Paper No. 03202004).

Independent claim 47 (from Group I) has been amended to remove “rotating step-wise around an axis” and having liquid conduits “arranged on a radius with respect to said axis”. Therefore, the alleged particulars of the subcombination are no longer expressly recited.

Furthermore, the Examiner’s utility statement does not appear to be proper with respect to the subcombination allegedly having “utility such as a carousel for testing the purity of polymer synthesis reagents where synthesis occur elsewhere in the apparatus.” Synthesis occur in “reaction mounts” as recited in the claims of both Group I and Group II. Specifically, independent claim 47 (from Group I) recites “a plurality of reaction mounts removably insertable onto said plurality of liquid conduits”. Claim 47 also recites “a plurality of liquid conduits formed within said carousel”. Therefore, the “plurality of reaction mounts”, which are “adapted to receive...reagents for synthesizing the polymer”, are located at “said carousel”. It should be noted that independent claim 53 (also of Group I) recites “a carousel having a plurality of reaction mounts...with a corresponding reaction mount adapted to receive...reagents for synthesizing the

polymer”. In regards to the claims of Group II, independent claim 56 recites “a carousel having a plurality of reaction mounts removably insertable onto a plurality of liquid conduits”. The reaction mounts receive “a reagent for synthesizing the polymer” from “work stations positioned above said carousel”. (see claims 56 and 57). Therefore, both Groups of claims provide for synthesis to occur in the reaction mounts at the carousel.

Notwithstanding the proposed amendments, Applicants respectfully traverse the restriction requirement, and request reconsideration of the restriction requirement.

The restriction requirement is submitted to be improper for several reasons. First, the alleged particulars (i.e., “rotating step-wise” and “arranged on a radius”) are functional limitations that, inter alia, show the interrelationship among elements of the invention. (See MPEP § 2172.01). It should also be noted that the Examiner has classified the claims of both Group I and Group II in the same class 422 and the same subclass 99. (Paper No. 03202004, page 2, Paragraph 1). This class/subclass is directed to “miscellaneous laboratory apparatus and elements” for a chemical “analyzer, structured indicator, or manipulative laboratory device.” Although claims 47-63 recite varying scopes of Applicants’ invention, Applicants respectfully submit that the examination of the claims would not impose a substantial burden on the Examiner, especially since the Examiner admits that the claims could be searched and classified in the same class and subclass.

Second, the Examiner has not clearly provided evidence that the alleged subcombination (i.e., Group I) has a utility other than the disclosed combination (i.e., Group II). As discussed above, the claims (as originally presented and currently amended) of Group I and Group II, both, provide for synthesis to occur in reaction mounts at the carousel.

Therefore, Applicants respectfully submit that the restriction requirement is improper. Nonetheless, Applicants have amended the claims to address the Examiner’s concerns, which as a result, renders the restriction invalid and/or moot. Reconsideration and withdrawal of the Restriction Requirement, and consideration and allowance of all pending claims, are respectfully requested.

***Objections to the Drawings***

In the Office Action dated October 3, 2003, the Examiner objected to the drawings for allegedly failing to show various features recited in claims 17 and 18. Paper No. 9, page 2. In an Amendment and Reply filed on January 5, 2004, Applicants cancelled the aforesaid claims without acquiescing in the propriety of these objections. As a result, Applicants believe these objections have been rendered moot and/or invalid. Therefore, Applicants, once again, respectfully request reconsideration and withdrawal of these objections.

***Rejections under 35 U.S.C. § 112***

In the Office Action dated October 3, 2003, the Examiner rejected claims 1-44 as allegedly being indefinite under 35 U.S.C. § 112, second paragraph. Paper No. 9, pages 2-4. In an Amendment and Reply filed on January 5, 2004, Applicants cancelled the aforesaid claims without acquiescing in the propriety of these rejections. As a result, Applicants believe these rejections have been rendered moot and/or invalid. Therefore, Applicants, once again, respectfully request reconsideration and withdrawal of these rejections.

***Rejections under 35 U.S.C. § 102***

In the Office Action dated October 3, 2003, the Examiner rejected claims 1, 19-20, 26-29, and 45 under 35 U.S.C. § 102(b), as allegedly being anticipated by U.S. Patent No. 4,871,683 to Harris *et al.* (herein referred to as "Harris"). Paper No. 9, page 4. The Examiner also rejected claims 1-3, 9, 19-21, 28, and 45 under 35 U.S.C. § 102(b), as allegedly being anticipated by U.S. Patent No. 5,106,583 to Raysberg *et al.* (herein referred to as "Raysberg"). Paper No. 9, page 5.

In an Amendment and Reply filed on January 5, 2004, Applicants canceled the rejected claims and added new claims 47-63. Furthermore, Applicants presented remarks to distinguish claims 47-63 over Harris and Raysberg. Notwithstanding the proposed amendments herein, claims 47-63 are still patentable over Harris and Raysberg.

For the Examiner's convenience, Applicants' previous remarks have been updated to reflect the current amendments and presented below.

Claims 47-63 (as originally presented and as amended) recite features, elements, and/or limitations not disclosed in either Harris or Raysberg. For example, independent claim 47 recites:

47. An apparatus for **synthesizing a polymer**, comprising:  
a carousel;  
a plurality of **liquid conduits formed within said carousel**; and  
a plurality of reaction mounts removably insertable onto said plurality of liquid conduits, wherein each liquid conduit forms a chamber below a corresponding reaction mount, wherein each reaction mount is adapted to receive at least one of a plurality of **reagents for synthesizing the polymer**.

Independent claim 53 recites:

53. An apparatus for **synthesizing a polymer**, comprising:  
a carousel having a plurality of reaction mounts coupled to a first side and a plurality of exit ports protruding from a second side, wherein each exit port communicates with a corresponding reaction mount adapted to receive at least one reagent from a plurality of **reagents for synthesizing the polymer**; and  
at least one engagement port positioned under said carousel, wherein said at least one **engagement port is raised or lowered to engage or disengage with at least one of said plurality of exit ports**, wherein said at least one engagement port is connected to a vacuum line adapted to drain liquid from the engaged exit port.

Independent claim 56 recites:

56. An apparatus for **synthesizing a polymer**, comprising:

a carousel having a plurality of reaction mounts removably insertable onto a plurality of liquid conduits, wherein each **liquid conduit forms a chamber** below a corresponding reaction mount; and

a plurality of work stations positioned above said carousel, wherein **each work station performs a physical step in a series of physical steps for synthesizing the polymer.**

Referring to the documents cited by the Examiner, neither Harris nor Raysberg teach, inter alia, “synthesizing a polymer” as recited in Applicants’ independent claims 47, 53, and 56. On the contrary, Harris describes a system and method for performing a clinical assay (Col. 3, lines 10-16), and Raysberg describes a protein analysis apparatus that hydrolyzes a protein and then derivatizes the resultant amino acid (Col. 4, lines 6-9; and Col. 9, lines 31-38).

Since Harris and Raysberg do not describe “synthesizing a polymer,” it necessarily follows that neither document describes, for example, “reagents for synthesizing the polymer” or “a plurality of work stations” wherein “each work station performs a physical step in a series of physical steps for synthesizing the polymer.”

Furthermore, regarding Applicants’ claims 47 and 56, the “turntable 12” described in Harris and the “rotating turret 19” described in Raysberg do not include, for example, “liquid conduits” as recited in Applicants’ invention.

Additionally, regarding Applicants’ claim 53, neither Harris nor Raysberg describe an “engagement port positioned under a carousel” that is capable of being “raised or lowered to engage or disengage with...exit ports” of the carousel “to drain liquid from the engaged exit port,” as recited in Applicants’ invention.

The dependent claims (i.e., claims 46-52, 54, 55, and 57-63) depend from independent claims 47, 53, and 56. Therefore, they are patentable over Harris and Raysberg for at least the reasons stated above, in addition to the additional features, elements, and/or limitations recited therein. Accordingly, for the reasons stated above, Applicants respectfully request consideration and allowance of the claims sought to be added by the foregoing amendment.

***Rejections under 35 U.S.C. § 103***

In an Amendment and Reply filed on January 5, 2004, the Examiner rejected claims 4-8, 10-18, 22-27, 29-44, and 46 under 35 U.S.C. § 103(a), as allegedly being unpatentable over Raysberg in view of U.S. Patent No. 5,472,672 to Brennan (herein referred to as “Brennan”). Paper No. 9, page 6.

In an Amendment and Reply filed on January 5, 2004, Applicants canceled the rejected claims and added new claims 47-63. Furthermore, Applicants presented remarks to distinguish claims 47-63 over Raysberg and Brennan. Notwithstanding the proposed amendments herein, claims 47-63 are still patentable over Harris and Raysberg. For the Examiner’s convenience, Applicants’ previous remarks have been updated to reflect the current amendments and presented below.

Claims 47-63 (as originally presented and as currently amended) recite features, elements, and/or limitations not taught or suggested by Raysberg or Brennan, taken alone or in combination. As discussed above with reference to the Examiner’s rejections under 35 U.S.C. § 102(b), Raysberg fails to teach or suggest, inter alia, “synthesizing a polymer”, “liquid conduits”, or engagable/disengagable “engagement ports.” It should be noted that Brennan fails to cure the defects of Raysberg since it likewise fails to teach or suggest, inter alia, a “liquid conduit formed within a carousel” or engagable/disengagable “engagement ports.”

Therefore, Applicants respectfully assert that claims 47-63 are patentable over Raysberg and/or Brennan for the reasons stated above. Applicants respectfully request consideration and allowance thereof.

***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for

allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "K. Patterson", is written over a horizontal line.

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